

Remedial Design Work Plan

General Comment:

1. The term “Site” usually refers to the Diamond Alkali Superfund Site. To avoid confusion, please replace all instances where “Site” has been used to mean the lower 8.3 miles of the Lower Passaic river with “lower 8.3 miles of the Lower Passaic River”, or “lower 8.3 miles” or “lower 8.3 miles of the LPR”, as appropriate. Examples include:
 - Section 1.1 Remedial Action Summary, 1st paragraph, 1st sentence
 - Section 1.2 Project Setting, throughout 1st paragraph
2. It is important to identify as early as possible those evaluations that will involve modeling, in case additional modeling capabilities need to be added to the RD Team or if new models need to be developed. Specific comments below note tasks that look like they might need modeling, but GSH should review all of the tasks and at least add a place holder for modeling if it is being contemplated.

Section 1.1 Remedial Action Summary

3. 1st paragraph, 2nd & 3rd sentences: Under CERCLA and the NCP, the terms “Remedial Action” and “Removal Action” are two separate response actions with different meanings and legal definitions, and thus must not be used interchangeably. The Tierra Removal was a removal action, not a remedial action. To avoid confusion, please delete the 2nd sentence and re-word the 3rd sentence to say “Phase 1 of a non-time-critical removal action (referred to as the “Tierra Removal”) was completed in 2012. It addressed contaminated sediments adjacent to the former Diamond Alkali facility located at 80-120 Lister Avenue in Newark, New Jersey (OU 1).”
4. 1st paragraph, 3rd to last sentence: Revise to “The Site Operable Units and Removal Actions are shown on Figure 1-2.” (this matches the title of the figure and correctly uses the term “removal action” as opposed to “remedial action”)
5. Capping bullet point: Revise the beginning of the 1st sentence to say “A bank-to-bank engineered cap over...”
6. Institutional Controls bullet point: The prohibitions on fish and crab consumption are imposed by NJDEP, so EPA does not determine when they can be lifted or adjusted. Please re-word that bullet point to say: “These controls will be used to protect the engineered caps and maintain prohibitions on fish and crab consumption until NJDEP, in consultation with EPA, determines they can be lifted or adjusted based on data from long-term monitoring. Additional community outreach will be conducted to encourage greater awareness of the fish and crab consumption prohibitions.”
7. Long-term Monitoring and Maintenance bullet point: add “remediation goals” after “interim milestones” and change “interim milestones” to “interim remediation milestones” to correspond to terminology used in the ROD.

Section 1.2 Project Setting

8. 1st paragraph, 2nd sentence: delete “people” (or move it to right after “1.4 million”)
9. 2nd paragraph, 2nd sentence: Add the datum to navigation depths (feet below MLW). Also, depth between RM 2.6 and RM 4.6 is 20 feet below MLW while the depth between RM 4.6 and RM 8.1 is 16 feet below MLW. Please correct RM range for the 10-foot channel (refer to the second paragraph on Page 2 of the Decision Summary in the ROD). Please delete or re-write the sentence *“The channel below RM 8.3 is now reported to have a depth ranging from 16 to 30 feet”* because these are the authorized depths.

Section 2 Pre-Design Activities:

10. No change to text needed: EPA expects that the submittal dates for the PDI WP and various addenda will be detailed in the Gantt-chart schedule to be submitted shortly, as previously discussed. This will help EPA arrange for staff with the relevant expertise to promptly review submittals. In addition, the Gantt schedule will facilitate discussion of the timing of the various work elements relative to each other to identify conflicts (e.g., coring during ecological sampling in the same stretch of river) or where the results of one field program will be used to refine or shape other field activities.

Section 2.1 Pre-Design Investigation and Characterization

11. Purpose of PDIs: Establishment of baseline conditions for long-term monitoring should be moved to the Site-Wide Monitoring Plan to avoid confusion and duplication of effort. The PDI should focus on gathering information to fully develop the RD.
12. Identify the need for and procedures for obtaining access agreements for land-based and marine work, as well as for those activities requiring waterfront access in this and related subsections. If EPA’s assistance will be required, this should be noted.

Section 2.1.1 Description of Pre-Design Activities

13. Consistent with comment #11 under Section 2.1, the following bullet points should be moved to the Site-Wide Monitoring Plan:
 - 2nd bullet under Performance Standards developed by EPA (note that fish and invertebrate tissue sampling is not necessary to establish performance standards)
 - Institutional Controls, Site Wide Monitoring Plan and Long-term Monitoring (and both sub-bullets)
14. Under Performance Standards developed by EPA, 3rd bullet: physical and chemical water column sampling program is needed to establish and refine performance standards – please correct text

Section 2.1.2 Geophysical and Bathymetric Surveys

15. Table 2-1: Depths should be indicated as Mean Low Water (MLW). Please note that the

water depth range is less than 3 feet in some areas. Mudflats are exposed during low tide.

Section 2.1.4.1 Sediment Chemical Cores

16. 1st paragraph, correct text as follows: Hurricane Irene is considered to be a 1-in-90 year flow event and not a 1-in-100 year event. In the third sentence, add the words “and deposition” after “significant erosion.”
17. The more recent coring programs do include elevation information for the top of core; therefore, data may be corrected using updated bathymetry. For cores that do not have top of core elevation, historical bathymetry may be used to estimate the elevation. Please update the text to allow for the possibility of using historical cores by “correcting” them based on elevation.

Section 2.1.8 Fish Studies

18. 1st paragraph, 1st sentence: move post-recovery monitoring to Site-Wide Monitoring Plan.
19. Fish Consumption Advisories: move to Site-Wide Monitoring Plan

Section 2.1.9 Phase I and II Cultural Surveys

20. Add that this study will rely at least in part on the geophysical data collected as described in Section 2.1.2.

Section 2.1.10 Habitat Survey

21. Add that the habitat survey will also be necessary to support compliance with applicable permitting requirements and other regulatory requirements.

Section 2.2 Borrow Site Assessment:

22. The placement of this discussion in a section separate from Section 2.1 PDI implies that this assessment is not part of the PDI. Is there a reason it is not?

Section 2.3 Site Wide Monitoring Plan

23. Since the interim remediation milestones and remediation goals established in the ROD are expressed in terms of sediment concentrations, the Site Wide Monitoring Plan will need to focus on sediment monitoring, as well as fish tissue monitoring, rather than water column monitoring, although the latter may also be important to show trends in COC concentrations over time post-remediation.

Section 2.3.1 Water Column Sampling Plan

24. Water column sampling in support of engineering performance standard development should be moved to Section 2.1 PDI. The water column sampling described in the Site Wide Monitoring Plan should be for long-term monitoring purposes.

25. In addition to the items listed to support engineering performance standard development, please include measurements of flow as well as surface and bottom velocities in the lower 8.3 miles over a range of tidal and seasonal conditions to develop a baseline for suspended sediment and contaminant loads and to support cap erosion calculations. The design will be more robust when calculations are based on actual measurements of these parameters and not solely on model predictions.

Section 2.3.2 Long-term Fish and Invertebrate Tissue Monitoring Studies

26. Baseline fish studies should be spread throughout the years and address a range of conditions likely to be encountered in the river.

Section 2.7 Treatability Studies

27. No change to text needed: EPA expects that the work plan(s) prepared for each treatability study will identify the information gathered during PDI that might be necessary to conduct the treatability study and assess the results. For example, to determine the feasibility of sediment washing (one example provided in Section 3.2 as a possible treatability study), waste characterization analyses will be needed to assess contaminant levels and evaluate the effectiveness of the process in treating to meet or be lower than pertinent state and federal regulatory levels for disposal or beneficial use.

Section 3.1 Design Phasing and Elements

28. Under “Propeller wash impact on caps”: In addition to obtaining information and data about vessels that use the lower 8.3 miles, consider assumptions about potential vessels (tug boats, dredging and capping platforms, barges, monitoring boats, etc.) that may be used during implementation of the remedy.
29. Under “Cap armoring to resist hydrodynamic forces”: Specify what model will be used for the evaluation, or if not known at this time, leave a place holder that the model will be specified in a future submittal (such as the PDI).
30. Under “description of the design elements”, 1st bullet: There is no permit equivalency process, so this term should not be used. Please re-phrase the bullet to say “All design and RA elements will comply with applicable permitting requirements and other regulatory requirements.”
31. Under “description of the design elements”, 3rd bullet: In 1st sentence, delete the words “bank to bank” after “dredged” and move them to before “engineered cap”.

Section 3.1.1 Plans and Technical Approaches for Remedy Design

32. Under “Dredging Method”: The ROD does not require consideration of dredging methods other than mechanical dredging. Rephrase the sentence to say “The ROD allows consideration of applicable dredging methods other than....”
33. Under “Floodplain Storage”: How will this evaluation be performed? If modeling is being considered, please specify the model to be used or leave a placeholder that the

model will be specified in a future submittal.

34. Under “Engineered Capping Design”, last sentence: add “or thinner” after “designed thicker”, unless it is already known that the cap won’t be any thinner (in which case justification should be provided).
35. Under “Engineered Cap Erosion/Armor Layer”: How will this evaluation be performed? If modeling is being considered, please specify the model to be used or leave a placeholder that the model will be specified in a future submittal.
36. Under “Wind and Wave Effects”: How will this evaluation be performed? If modeling is being considered, please specify the model to be used or leave a placeholder that the model will be specified in a future submittal.

Section 3.1.3 Dredged Material Management

37. Please delete this section, since it is redundant with information presented in Sections 3.1.4 through 3.1.6. In particular, it does not discuss sediment disposal in as much detail as Section 3.1.6, so that reviewers were confused over whether Section 3.1.4 or 3.1.6 would apply.

Section 3.1.4.1 Barge Transport

38. Paragraph under 1st set of bullets: Re-phrase 1st sentence to say “Barge transport of dredged material in the Lower Passaic River could potentially require several bridges over the river to be opened and closed....” (The 1st sentence as currently written seems to contradict the rest of the paragraph that says that EPA evaluated that the bridges may not need to be opened.)
39. Last bullet point of the section: The ROD acknowledged that technologies other than bypass pumping could be used to transport dredged materials from the RM 6.1 to RM 5.6 stretch of the river. Modify end of bullet to say “...by incorporating bypass pumping or other appropriate technology to minimize bridge openings”

Section 3.1.5 Sediment Processing and Water Treatment

40. Under “Site Selection”, 3rd sentence: EPA identified 4 potential sites meeting the selection criteria in the ROD not the Proposed Plan.

Section 3.1.6 Sediment Transportation and Disposal

41. 1st paragraph, 4th sentence: Correct the end of the sentence to read “...will include getting input from the communities potentially affected by transport and disposal of dredged sediment.” As currently written, the sentence seems to say that communities will only be consulted while dredged sediments are being transported through their neighborhoods.
42. Transport to Landfill and Thermal Treatment and Disposal: It should be noted that in addition to incineration ash, other hazardous dredged materials may require disposal in a Subtitle C landfill. Not all Subtitle D landfills are permitted to accept wastes with dioxin

and this should be noted in the text. The dredged materials management program needs to address the issue of decontamination and cross contamination in the handling, processing, and storage of sediment. This is of particular concern for material potentially segregated for beneficial use or material proposed for disposal in a Subtitle D landfill.

43. Transport to Landfill: Please cite New Jersey Solid Waste Regulations, N.J.A.C. 7:26-1.6, definition of a solid waste at the end of the 2nd sentence. A link to the relevant chapter in New Jersey regulations is provided here for your information:

<http://www.nj.gov/dep/dshw/resource/2009%20RULES/26%20CHAPTER%201.pdf>

44. Thermal Treatment and Disposal: Dredged material characterized as hazardous under RCRA with Underlying Hazardous Constituents (UHCs) over 10 times the Universal Treatment Standard (UTS) for any constituent will require treatment prior to disposal. Treatment is not limited to dioxin.

Section 3.2 Engineering Studies

45. Under “On-site Treatment”: 2nd paragraph refers to “RI/FFA” – change that to “RI/FFS”

Section 4.1 Quarterly Reports

46. The AOC/SOW requirement is for “Progress Reports”, not “Quarterly Reports”. Please correct the terminology. The 1st sentence of this section should reflect the SOW terms: “Progress reports will be submitted to the EPA on a quarterly basis, or as otherwise requested by EPA, in accordance with the Settlement Agreement and until EPA approves the Final (100%) RD.”

Section 4.3.1.1 Design Criteria Report

47. Second Bullet: (No change to text needed) While it is recognized that some analyses are being presented in detail in separate reports (not in the Design Criteria Report) and may be prepared on a separate time line, EPA notes that information generated in some of those other investigations may be needed to properly review the Design Criteria Report. For example, in order to understand the proposed site layout plan (sub-bullet #6), it would be helpful to have a summary of information on the site selection provided. In the presentation on the PFDs (sub-bullet #8), preliminary sizing for major equipment items would be helpful in the review.

Section 4.3.1.2 Basis of Design Report

48. 8th bullet (“Discussion of Congressional action...”): While it is recognized that things may change as the design progresses, it would be helpful to provide more detail in the RDWP for this item, because it is a long-lead item involving a potentially slow administrative process. In addition, this task may need to be addressed before the basis of design report – EPA would like to discuss this when the Gantt schedule is submitted.

Section 4.3.1.3 Preliminary Drawings and Specifications

49. Provide a list of specifications (Division 1 and higher).

Section 4.3.1.4 Design Elements

50. Information on railroad access will need to be provided if that is the selected approach.

Section 4.3.1.6 Transportation and Off-Site Disposal Plan

51. Add bullet point: "Proposed due diligence that will be used in the selection of disposal sites."

Section 4.3.2.2 Intermediate Drawings and Specifications

52. The reference to CSI Master Format 2012 should be updated to the 2016 edition, unless there is a reason to use the 2012 version instead.

Section 4.3.3 Value Engineering Analysis

53. Last paragraph, 1st sentence: Value Engineering will review major components of the remedial design, not of the selected remedy, which is set in the ROD. Also, in accordance with EPA guidance, VE will seek to optimize the functions of systems, equipment, facilities, services and supplies within the remedy implementation, not to optimize the remedy which was selected in the ROD. Revise that sentence to read "Major components of the remedial design will be evaluated to identify potential cost savings during the RD and RA to optimize the functions of systems, equipment, facilities, services and supplies within the remedy implementation and ensure efficient and effective remediation."
54. To avoid confusion, the end of the last sentence in the first paragraph should read: "...or it might reflect a more significant change in the approach to implementation."

Section 4.3.4.1 Updated Drawings and Specifications

55. The reference to CSI Master Format 2012 should be updated to the 2016 edition, unless there is a reason to use the 2012 version instead.

Section 4.3.4.2 Pre-Final Design Elements and Deliverables

56. Add a bullet: "Status of applicable permitting and other regulatory requirements, and copies if available."

Section 4.3.4.3 Update of Supporting Deliverables and Additional Supporting Deliverables

57. This section describes all of the supporting deliverables in SOW paragraph 5.7, except for the Field Sampling Plan, QAPP, and Transportation and Off-Site Disposal Plan. While the Field Sampling Plan and QAPP are associated with the PDI and thus might not need to be updated for the Pre-Final (95%) Remedial Design, the Transportation and Off-Site Disposal Plan might need to be and so should be added.

Table 5-1 Remedial Design Schedule

58. Treatability Study Report: AOC/SOW specifies that the Treatability Study Evaluation Report will be submitted 180 days after EPA's approval of the TSWP. Since all other documents quote the AOC/SOW deadlines, this should do the same, to avoid confusion.
59. The components included under PDI vs Site Wide Sampling Plan may need to be edited in accordance with comment #11 under Section 2.1 above.

Figure 1-1 Site Location and Vicinity Map

60. Legend: The blue line should be labeled as "Approximate Navigation Channel Centerline", because the river centerline is different.

Emergency Response Plan

General comment:

61. This ERP focuses on the in-water work and does not appear to address potential emergencies at the sediment processing facility. As design progresses, this document will need to be modified to include the facility in the response plan. Local resources should be included in preplanning activities including notification of these agencies of the types of materials that are on-site that present hazards.

Section 1 Introduction

62. Bullet #2:

- The requirement in AOC/SOW is to plan for and provide dates of meetings with the local community, including the various agencies and organizations specified in this bullet. This requirement is not met in this ERP. Please add a section in the ERP – at this time, it may not have dates for meetings, but it should at least list the agencies or organizations that will be met with, and a statement that more organizations may be added as they are identified in the future.
- Specification of a meeting with the City of Newark will only lead to questions about why Tetra Tech is not planning on meeting with Kearny, East Newark, Harrison, Belleville and North Arlington. The last sentence of this bullet is vague and does not make sense (how could a meeting with Newark lead to finalization of agreements with the other municipalities?). Remove the last 2 sentences of this bullet and discuss the issue fully in the new section requested in the sub-bullet above (for e.g., if the intent is to rely on Newark fire and police, because the entire work area borders Newark, then that should be explained clearly).

63. Bullet #4 would be clearer if a few words describing Section 4.1 of the SOW were included, such as "in the event of a release of hazardous substances".

Figure 1-1 Passaic River OU 2 Incident Command Chart

64. "Passaic River OU 2" (2 instances) should be replaced with "Diamond Alkali OU 2". If the designation "Passaic River" is preferred, then "Lower 8.3 Miles of the Lower Passaic River" should be used.

65. Public Information Officer: should "Interfaces with community" be added here?

Section 4 Spill Containment Procedure

66. Figure 4-1 Hazardous Material of Waste Release Emergency Response: Why is there a question mark after "EC/SSO"?

Appendix A Emergency Contact Information

67. Alice Yeh cell phone: 914-912-7293

68. Newark Fire Department zip code may have "911" appended to the end of it by mistake.

69. Add East Newark fire department

Appendix B Emergency Action and Evacuation Form

70. Evacuation Map Area 1: does not extend down to RM 0

71. Evaluation Maps Areas 1/2/3: Hospitals and docks should be marked on the maps.